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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,861	03/24/2004	Yoon-Ho Kang	8054-42 (LW9080US/KE)	5480
22150	7590	10/13/2005	EXAMINER	
F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797			HAMILTON, CYNTHIA	
			ART UNIT	PAPER NUMBER
			1752	
DATE MAILED: 10/13/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/807,861

Applicant(s)

KANG ET AL.

Examiner

Cynthia Hamilton

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 8/1/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15-19 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-13, 15-19 and 21-23 is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 11-13, 15-19 and 21-23 are allowed.
2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants has not pointed out where the amended (or new) claim is supported, nor does there appear to be a written description of the claim limitation "wherein at least one of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub> is halogen and at least one of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub> is the alkoxy group" found in the application as filed. See particularly MPEP 2163.04. This is the added amendment to claims 1 and 3 by applicants. This subspecies is not clearly taught in the original claims or specification.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 4-7 require that a compound with "at least one of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub> is halogen and at least one of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub> and R<sub>8</sub> is the alkoxy group" yet

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the compounds used in claims 4-7 to make the compound do not yield such a compound. Thus, what is meant by this limit with respect to instant claims 4-7 is unclear.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erdmann (3,295,974). With respect to instant claims 1-3, and 10, the epoxy resins of Erdmann teach the compound of applicants' claims 1-2. What is not disclosed explicitly is a resin with both an alkoxy group and a halogen present as required in the newly amended claims. The Erdmann resins fall within the range of instant n, in col. 1, lines 11-57, wherein Erdmann n = instant n - 1 as shown by the formula set forth in col. 1, and the molecular weight set forth by instant claims 2 and 21 with cited weights of 5800, 2200, 3600, 1200, etc. The TABLE of Erdmann discloses 1, 4, 7-8, 10, 12-20, 22-29 to be compounds with mixtures of R groups showing that more than one R group can be present on the resins of Erdmann. The R groups can be different and in col. 1, lines 43-45 are taught as alkyl, cycloalkyl, alkenyl, alkoxy, carbonyl or nitro groups, etc. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See particularly MPEP 2144.05. Thus, the formation of any of the resins with mixtures of any of the R groups would have been *prima facie* obvious to obtain a light sensitive material.

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With respect to instant claims 2, 8 and 21, the molecular weights of the resins of Erdman fall within the range of 650 to 13,000 as disclosed in col. 7, lines 43-45 which makes obvious the overlapping range of 800 to 20,000 found in applicants' invention. With respect to instant claims 3, 8-10, while Erdman does not specifically disclose how their resins were individually made, in col. 4, he disclosed that the resins are made reacting the unsaturated dihydroxy aromatic ketone, of which 22-29 examples would generate the instant compounds, with epichlorhydrin in the presence of a basic condensation agent such as an alkali metal or an alkaline earth metal hydroxide, i.e. an alkali metal salt, with water and/or an organic solvent such as an aliphatic alcohol to aid in the reaction. In view of ethanol being an aliphatic alcohol cheaply obtained and sodium hydroxide and potassium hydroxide being the commonly used alkaline earth metal hydroxide, the use of either or both in making the epoxy chalcone resins of Erdman would have been prima facie obvious in view of Erdman teaching the general procedure for forming his resins by using aliphatic alcohols and alkaline earth metal hydroxides.

2. Applicant's arguments filed August 1, 2005 have been fully considered but they are not persuasive. Applicants argue that Erdman et al gives insufficient motivation to form the now claimed compound and method of making. The examiner notes that Erdman et al as the same level of motivation to make the compound as do applicants in their original claims and disclosure. The rejection is made new in view of applicant's amendments and is held as valid as applicant's support for the material claimed.

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

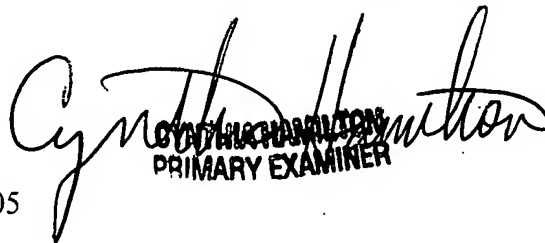
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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

*Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Hamilton whose telephone number is 571-272-1331. The examiner can normally be reached on Monday through Friday 9:30 am to 5:00 pm.*

*If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571) 272-0729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.*

*Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).*



CYNTHIA HAMILTON  
PRIMARY EXAMINER

Cynthia Hamilton  
Primary Examiner  
Art Unit 1752

October 5, 2005